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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,073	08/22/2003	Yuji Ishii	FUJZ 20.589 (100794-00475)	9701
26304 7590 01/12/2007 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER DO, CHAT C	
			ART UNIT	PAPER NUMBER
			2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/647,073

Applicant(s)

ISHII ET AL.

Examiner

Chat C. Do

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003 and 09 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because:

The abstract is written more than 150 words in length.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-7 cite a device for filtering an input string. In order for claims to be statutory, claims must either include a physical/practical application or a concrete, useful, and tangible result. However, claims 1-7 merely disclose components of the filter

without disclosing a practical application or a tangible result. Thus, claims 1-7 are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by David (U.S. 4,805,129).

Re claim 1, David discloses in Figures 6-7, 16, and 22-23 a digital filter device (e.g. Figure 7 as FIR filter) comprising: one or more computing processors for generating input data strings (e.g. as input image signal to any of the Figures above); an input data memory for storing the input data strings (e.g. as the prestore 24 or array store 26 for pushing data into the filter processes); and a digital filter for reading the input data strings out of the input data memory in a predetermined order to be filtered and for generating output data strings (e.g. the actual FIR filter is in Figure 7 and the output data string is the result of the last adder 48 in any Figures).

Re claim 2, David further discloses in Figures 6-7, 16, and 22-23 an output data memory for storing the output data strings generated by the digital filter (e.g. the partial products store memory 28), and a data processor for reading the output data strings stored

in the output data memory in a predetermined order to be processed (e.g. control by the control means 60 along with 88 in Figure 23).

Re claim 3, David further discloses in Figures 6-7, 16, and 22-23 a switch table for associating an address of the input data memory in which the input data strings are stored with an address of the output data memory in which the output data strings are stored, and a switching controller for providing timings of reading the input data strings out of the input data memory based on the switch table and of writing the input data strings a the output data strings into the output data memory through the digital filter (e.g. control by the control means 60 along with 88 in Figure 23).

Re claim 4, David further discloses in Figures 6-7, 16, and 22-23 a filter memory for storing data-under-calculation upon filtering for a first input data string before filtering for a second input data string from filtering for the first input data string, in a delay circuit included in the digital filter (e.g. Figure 23 with feedback to store the partial product), and for restoring the data-under-calculation to the delay circuit when filtering the input data string subsequent to the first input data string is started (e.g. as tap storage as the array store).

Re claim 5, David further discloses in Figures 6-7, 16, and 22-23 one or more coefficient memories for storing a filter coefficient corresponding to each input data string of the digital filter (e.g. weighting coefficient calculator 32), a filter coefficient corresponding to an input data string to be filtered being set in the digital filter (e.g. col. 11 lines 11-21).

Re claim 6, David discloses in Figures 6-7, 16, and 22-23 a digital filter device (e.g. Figure 7 as FIR filter) comprising: an input data memory for storing input data strings (e.g. prestore 22 memory); a digital filter for generating output data strings which are obtained by filtering the input data strings (e.g. particular Figure 7), inputted from the input data memory (e.g. array store memory 26), and an output data memory for storing the output data strings (e.g. partial products store 28 memory).

Re claim 7, it has similar limitations cited in claim 3. Thus, claim 7 is also rejected under the same rationale as cited in the rejection of rejected claim 3.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 5,262,972 to Holden et al. disclose a multichannel digital filter apparatus and method.
- b. U.S. Patent No. 4,939,684 to Gehrig et al. disclose a simplified processor for digital filter applications.
- c. U.S. Patent No. 5,311,459 to D'Luna et al. disclose a selectively configurable integrated circuit device for performing multiple digital signal processing functions.
- d. U.S. Patent No. 6,510,444 to Mackre et al. disclose a data processor architecture and instruction format for increased efficiency.
- e. U.S. Patent No. 5,586,068 to Rakib discloses an adaptive electronic filter.

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f. U.S. Patent No. 5,898,731 to Kwak discloses an auto-coefficient renewal digital channel equalizer.

g. U.S. Patent No. 6,018,755 to Gonikberg et al. disclose an efficient implementation of an FIR filter on a general purpose processor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The examiner can normally be reached on M => F from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2193

January 8, 2007

